

### Collection Forum

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#### PAPERS

##### NATIONAL MUSEUM OF WALES SPECIMEN CONDITION SURVEY FORM FOR GEOLOGICAL COLLECTIONS

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Abstract.-The importance of condition surveys of geological collections is widely acknowledged. At the National Museum of Wales a condition survey form has been devised to facilitate this task. The form lists ten parameters that are scored from a master scoring guide. The results, in a format easily entered into a database, show the current state of the collections and provide a baseline against which future deterioration will be measured.

##### THE RELIABILITY OF SPOT TESTS FOR THE DETECTION OF ARSENIC AND MERCURY IN NATURAL HISTORY COLLECTIONS: A CASE STUDY

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Abstract.-In the past, compounds containing arsenic and mercury were often used during taxidermy to prevent insect infestation. Thus, specimens in natural history collections may contain these hazardous substances. Records of such treatments were not generally kept and as a result the degree of contamination in many collections is not known. In light of this, one of the objectives of this study was to determine the extent to which arsenic and mercury are present in bird and mammal specimens at the Provincial Museum of Alberta (PMA). The second objective of the study was to assess the effectiveness of spot tests for the detection of these substances in the specimens. A suite of 61 samples was examined using both spot tests and X-ray microanalysis. The results indicate that there is arsenic contamination in the bird collection, and to a lesser extent, the mammal collection. From a comparison of the X-ray microanalysis to the spot tests, it was found that the spot test for arsenic gave reliable results for the specimens examined. This suggests that museum professionals who do not have access to analytical equipment can use this test as an indicator of arsenic contamination. Since the spot test for mercury was carried out on a small number of specimens, it is difficult to draw conclusions about its reliability. However, there appear to be difficulties with the use of this test for the sample compositions encountered in natural history specimens.

##### INTERACTION OF RESEARCH, MANAGEMENT, AND CONSERVATION FOR SERVING THE LONG-TERM INTERESTS OF NATURAL HISTORY COLLECTIONS

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Abstract - It is generally accepted that natural history collections have considerable value and that these resources should be maintained for future reference and utilization. However, approaches for serving the long-term interests of collections often vary, depending on whether perspectives are based on research, management, or conservation. An effort is made to objectively assess the strengths and weaknesses of these perspectives, with respect to one another and to the realities of an evolving work force. While it is recognized that each perspective provides definite contributions to serving the long-term interests of collections, it is also recognized that no single or paired combination provides a suitable solution. The future of natural history collections is dependent upon a balance of utilization, management, and conservation; this includes the resources, decision-making, training, and other factors needed to make each function a viable contributor to a common objective.

EVALUATION OF AN INTEGRATED PEST MANAGEMENT  
PROGRAM, DIVISION OF BIRDS, U.S. NATIONAL MUSEUM OF  
NATURAL HISTORY

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Abstract - A three-year insect monitoring study was conducted to analyze the effectiveness of an Integrated Pest Management (IPM) program developed in the Division of Birds at the Natural History Museum, Smithsonian Institution (USNM). After implementation of the IPM program (which included monitoring with sticky traps and chemical applications of insecticides to baseboards, cracks, and crevices) a significant decrease was noted in total numbers of insects trapped in the divisional offices and collection area. The target pest was the odd beetle (*Thylodrias contractus*; Family Dermestidae). During the three year period, 65% of all insect categories peaked in spring and summer and had a positive relationship with relative humidity peaks. Monitoring with sticky traps, however, did not indicate any appreciable decrease of insects inside storage cabinets.